REMARKS

Claims 81, 82, 84-92, 137 and 138 are presently pending. Amendments to the claims are discussed below. No new matter has been added herewith. The following addresses the substance of the Office Action.

Objection

Claim 86 was objected to for reciting "Hepatitis B virus (HBV)" twice. Applicant has deleted the second recitation of "Hepatitis B virus (HBV)" in Claim 86 as well as in Claim 92.

Indefiniteness

Claim 92 was rejected under 35 U.S.C. § 112, second paragraph as being indefinite because there was insufficient antecedent basis for recitation of "said pathogenic agent." Claim 92 is amended to replace recitation of "said pathogenic agent" with "said hepatitis virus." Amended Claim 87 provides antecedent basis for recitation of "hepatitis virus." Accordingly, the Applicant respectfully requests that the rejection be withdrawn.

Written Description

Claims 81-92, 137 and 138 were rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. In particular, the Examiner concluded that the specification does not provide sufficient written support for the genus of Toll-like receptor homologs claimed. Without prejudice, and solely to expedite prosecution of the application, the Applicant has amended the claims to recite "A method for monitoring a response to a therapeutic protocol to prevent infection by a hepatitis virus, said method comprising determining the level of a cell surface marker selected from the group consisting of Toll-like receptor-2 (TLR-2) and Toll-like receptor-4 (TLR-4)." The Examiner acknowledged in the paragraph that bridges pages 6 and 7 of the Office Action that the specification does provide support for a correlation between TLR-2/TLR-4 expression with HBV and HCV infection. Accordingly, the Applicant respectfully requests that the rejection based on non-compliance with the written description requirement be withdrawn.

Enablement

Claims 81-92, 137 and 138 were rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the enablement requirement. Specifically, the Examiner concluded that the

specification does not provide sufficient enabling disclosure with regard to the claimed genus of (1) infections; (2) pathogens; as recited in Claims 86 and 92; (3) diseases; (4) all known Toll-like receptors; or (5) Toll-like receptor homologs. In addition, the Examiner indicated that the specification does not enable the claimed method for monitoring the response to a therapeutic protocol to (6) prevent infection by a pathogenic agent or (7) prevent the development of a disease condition.

Without prejudice, and solely to expedite prosecution of the application, the Applicant has amended the claims to be limited to: 1) infection by hepatitis virus; 2) HBV and HCV; 3) disease conditions resulting from infection by hepatitis virus; and (4 and 5) TLR-2 and TLR-4. As noted above, the Examiner acknowledged in the paragraph that bridges pages 6 and 7 of the Office Action that the specification does provide support for a correlation between TLR-2/TLR-4 expression with HBV and HCV infection. With regard to Items (6) and (7) above, the Applicant has amended Claims 81 and 87 by substituting recitation of "prevent" with "treat" [i.e., "A method of monitoring a response to a therapeutic protocol to treat..." (infection by a hepatitis virus or development of a disease condition)].

In view of the amendments to the claims, the Applicant respectfully requests that the enablement rejection under 35 U.S.C. § 112, first paragraph be withdrawn.

Anticipation

Claims 81, 83-85, 87 and 89-91 were rejected under 35 U.S.C. § 102(e) as being anticipated by Renshaw et al. (2002 *J Immunol* **169**:4697-4701). Renshaw et al. relates to the concept that increased susceptibility to infections and poor adaptive immune response in aging may be due to the decline in TLR expression and function. In particular, the reference reports that there is a reduction in TLR-1, TLR-2, TLR-4, TLR-5, TLR-6, TLR-7, TLR-8 and TLR-9 in aged mice compared to young mice, and that decreased expression and function of the various TLRs may predispose the elderly to various bacterial and yeast infections. However, there is no disclosure of a correlation between TLR-2/TLR-4 expression with viral infection by hepatits virus, such as HBV or HCV, let alone of a method of monitoring a response to a therapeutic protocol to treat infection by a hepatitis virus, wherein the level(s) of TLR-2 and/or TLR-4 serve as indicator(s) of the efficacy of the therapeutic protocol to treat infection by hepatitis virus. Accordingly, the Applicant respectfully requests that the rejection be withdrawn.

Obviousness

Claims 81-92, 137 and 138 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Renshaw et al. (supra) in view of Akira et al. (2003 *Immunol Letters* **85**:85-95). The teachings of Renshaw et al. are summarized above. Akira et al. teaches that various pathogenic ligands from various bacterial and viral pathogens are recognized by the Toll-like receptors and that the antiviral and ant-cancer compound imidazoquinoline, used for treatment of HCV, papillomavirus and herpes virus infection, activates immune cells via Toll-like receptor 7 (TLR-7). However, based on the combined teachings of Renshaw and Akira et al., one of ordinary skill in the art would know of no reason to develop the presently claimed methods of monitoring a response to a therapeutic protocol to treat infection by a hepatitis virus (or to treat development of a disease condition resulting from infection by a hepatitis virus) comprising determining the level of TLR-2 and TLR-4, wherein the efficacy of the therapeutic response is determined by a change in the level of TLR-2 and/or TLR-4. Accordingly, the claimed methods are not *prima facie* obvious and the Applicant respectfully requests that the rejection be withdrawn.

Nonstatutory Double Patenting

Claims 81-92, 137 and 138 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7 and 12 of copending, currently commonly owned Application No. 11/597,063, which has the same inventive entity as the instant application. As neither application is yet in condition for allowance, Applicants request that the Examiner hold this double patenting rejection in abeyance until such time as either Application No. 11/597,063 or the present application is otherwise in condition for allowance.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution.

Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

CONCLUSION

In view of Applicants' amendments to the Claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: August 4, 2010

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